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Notes on a Few Species of *Neothomasia* from Utah¹ (Homop.: Aphididae).

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(Plate XI.)

NEOTHOMASIA SALICINIGRA Knowlton. (Plate XI, figs. A-C, J.)

This dusky aphid was collected in Cedar Canyon, Utah, during the summer of 1925. The collection was made on willow at an elevation of 7000 feet, the aphids feeding on the bark of small twigs.

Alate vivipara.—Body black, rather broad and 1.35 to 1.75 mm. long; rostrum scarcely reaching second coxae; head broad and rounded in front; antennae black, except base of III, and armed with rather long curved sensilla; antennal III, 0.34 to 0.37 mm. long, with 8 to 10 wide-margined sensoria in irregular to scattered row; IV, 0.2 to 0.25 mm., with 0 to 3 sensoria; V, 0.17 to 0.21 mm., occasionally with one secondary sensorium; VI, 0.29 to 0.36 (0.09+0.2 to 0.1+0.26) mm.; legs rather short, dusky to black; wing venation typical; veins dark with membrane slightly dusky; abdomen with dark bands in dorsal surface, and with dark areas on the sides; cornicles short, 0.09 to 0.11 mm. long, with closed reticulations over much of the surface and with a moderate flange; cauda rounded to slightly elongate, and without constriction; anal plate broadly rounded.

This species resembles *Neothomasia salicicola* (Essig) in many ways. The winged form differs from the latter particularly in the following respects: antennal segments longer; sensoria more numerous on antennal III and sometimes occurring on IV and V, also; head more flattened across the front; cauda shorter and broader.

¹ Contribution from Department of Entomology, Utah Agricultural Experiment Station, Logan, Utah. Approved for publication by Director.

Neothomasia utahensis Knowlton, n. sp. (Plate XI, figs. D-F, K, L.)

This aphid was present in large colonies on the bark of willow (*Salix* sp.) at Hyde Park and North Logan, Utah, on June 22, 1925. The small twigs were most commonly attacked well out toward the tips, and the aphid colonies very frequently extended on to the tender new growth. Some of the aphids were feeding on the leaves and their petioles, but bark feeding was much more common. The aphid colonies were attended by a great number of ants of the species *Formica rufa*.

This aphid very much resembles *Neothomasia salicicortices* (Essig), but the winged form differs from the latter in the following respects: antennal III usually longer and with fewer sensoria; base of antennal VI shorter, with filament noticeably longer than base; anterior margin of head less rounded; wing veins and the marginal shading noticeably darker.

Alate vivipara.—Body wide, more or less dorso-ventrally compressed and armed with long prominent hairs; size 2 to 2.6 mm. long; head and thorax black; anterior margin of head rather straight with a slight median depression; antennae attached in a slight depression under margin of the head; rostrum reaching third coxae; antennae dusky to black, with proximal three-fifths of III, and a narrow band at distal ends of III, IV, and V yellowish; antennal III, 0.5 to 0.55 mm. long and armed with 9 to 13 round sensoria, the average being 11 to 12; IV, 0.25 mm., with one to three sensoria; V, 0.21 mm., occasionally with one secondary sensorium; VI, 0.1+0.14 mm.; legs of moderate length, hind tibiae 1.1 mm. long; front wings with media twice branched, and with dusky shading along each side of the dark veins, hind wings with both media and cubitus present, dusky and very faintly clouded along their margins; abdomen dusky brown, with dark bands on the dorsum and black areas on the sides of the segments; cornicles black, truncate, 0.1 mm. long, with closed reticulations over much of the surface; cauda black, rounded, armed with four long hairs; anal plate black, broadly rounded, armed with numerous long hairs.

Type in the collection of the writer. Paratypes are in the U. S. National Museum.

NEOTHOMASIA POPULICOLA (Thomas). (Plate XI, figs. G-I, M).

This is one of the most common aphids infesting Utah poplars. The infestation often becomes very severe. The aphids

attack the bark on the twigs and become numerous on the leaves and petioles. Leaves of balsam poplars at Smithfield were heavily infested with this species during the fall of 1926.

Collections have been made on *Populus angustifolia*, *P. balsamifera*, *P. tremuloides*, and *Salix fluviatilis*.

Alate vivipara.—Body black and armed with long, curved hairs; rostrum reaching second coxae; antennae black, with proximal four-fifths of III lighter; antennae inserted slightly under margin of head; antennal III, 0.3 to 0.38 mm. long and armed with 12 to 20 round sensoria; IV, 0.2 to 0.25 mm., with two or three sensoria; V, 0.17 to 0.2 mm.; VI, 0.1 + 0.19 to 0.11+0.21 mm.; wing venation typical, veins dusky; front wings with dusky to black shading along the veins and at tips; legs moderately long; abdomen blackish with darker bands on dorsum and black areas on the sides; cornicles short, yellowish to dusky, 0.1 mm. long, with closed reticulations over much of the surface; cauda rounded; anal plate broadly rounded.

Apterous vivipara.—This form has a large yellowish Y-shaped area on the abdomen.

In Utah, this species has been collected from Bellevue, Benjamin, Brigham, Eden, Emigration Canyon, Farmington, Garden City, Leeds, Logan, Payson, Providence, Provo Canyon, Saint George, Salina, Salt Lake City, Smithfield, Tremonton, and Zion National Park. The writer has also collected his aphid from the Kaibab Forest, Arizona; Emigration Canyon and Paris, Idaho; Savage, Minnesota, and St. Croix Falls, Wisconsin.

EXPLANATION OF PLATE XI.

Neothomasia salicinigra Knowlton. *A*, wing; *B*, cornicle; *C*, antenna; *J*, cauda and anal plate. *N. utahensis* Knowlton, n. sp., *D*, wing; *E*, cornicle; *F*, antenna; *K*, head; *L*, cauda and anal plate. *N. populicola* (Thomas), *G*, wing; *H*, cornicle; *I*, antenna; *M*, cauda and anal plate. All down from alate females.

Museum of Comparative Zoology Reopened.

Agassiz Museum, the Harvard University museum of comparative zoology, was opened again to the public beginning June 19, following the first extensive remodeling it has had in fifty years. (*Science*, June 22, 1928.)